MITC Mitigation

Response to Comments on the July 2009 Draft MITC Mitigation Proposal
November 3, 2010

COMMENT	Commenter[1]
General Comments	
Instead of the proposed one size fits all permit conditions, there should be ranges based on previous local permit conditions and history of compliance. The CAC could allow smaller buffer zones with smaller acreage treated at reduced application rates for areas that have no history of incidences. *Response: DPR realizes that there will be situations for which the buffer zones in the mitigation document may be excessive. In these cases, CAC can assess the local conditions and determine if smaller buffer zones will be adequate.*	16
Pesticide notification is needed for fieldworkers, residents, schools and businesses in adjacent properties. *Response: Fieldworkers notification is required. California Code of Regulations (CCR) Section 6618 requires the operator of the property and the pest control business to notify their employees of a scheduled application. The mitigation document requires that, if a buffer zone will extend into an adjacent agricultural property, the operator of the property to be treated must get an agreement from the adjacent property owner, and document how that adjacent property owner will ensure that his employees will not enter the buffer zone. DPR believes that the buffer zone, along with the other mitigation measures, will provide adequate protection to residents and bystanders and therefore notification is not needed.*	1
Mitigating exposure to 220 ppb is not adequate to protect sensitive populations from acute illness. It would be helpful if the mitigation document state the toxicity endpoints, the acute reference exposure level of 22 ppb, and how the target values (220 ppb instead of 22 ppb) for these mitigation measures would be health-protective for the general population as well as for sensitive groups. *Response: DPR used the 220 ppb target value over an 8-hour period as the value to model buffer zones. These modeled distances were then increased by 25% to provide additional protection in the event of peak air concentrations that move offsite. However, this is only one of the measures that were included in the mitigation document. DPR has also included restrictions on when, where and how applications can be made, as well as requirements to use post-application water treatment or soil capping to reduce the potential for MITC off-gassing. A detailed discussion of the MITC risk assessment can be found at http://www.cdpr.ca.gov/docs/risk/rcd/mitc_sb950.pdf. The risk mitigation directive discusses the reasoning for using 220 as the mitigating target. The risk mitigation directive can be found at http://www.cdpr.ca.gov/docs/emon/pubs/mitc/dirctv120202.pdf.*	1, 15

[1] The list of commenters can be found at the end of this document.

The scope of these permit conditions is limited to acute effects and both sub-chronic and chronic exposures were identified when MITC was listed as a TAC. *Response: Since the risk from acute off-site exposures to residents and bystanders poses the most immediate concern, DPR made this a priority. DPR's plans for additional mitigation are spelled out in the Risk Mitigation Directive (http://www.cdpr.ca.gov/docs/emon/pubs/mitc/dirctv120202.pdf).*	1
County Agricultural Commissioners should not be given the discretion to reduce restrictions, such as shortening buffer zones or eliminating post-application water treatments. In the context of a challenge to the methyl bromide regulations, the San Francisco County Superior Court found that language allowing CAC to reduce DPR's recommended buffer zones was unlawful. *Response: The last statement of this comment contains an inaccurate statement. The court decision was about a specific section of the methyl bromide regulations and does not apply to permit conditions. In addition, the ruling stated that the regulatory language was unclear, not unlawful. The court asked DPR to clarify the basis the CAC would use in making changes. DPR's California Environmental Quality Act equivalency hinges on the permit system, permit conditions and the CAC's discretion and understanding of local conditions.*	1
As written, it is difficult to figure out the requirements for a particular application type. Requirements, restrictions and application types should be grouped. A comparative chart or summary listing the requirements for each method would be helpful. *Response: In the final suggested permit conditions language, WH&S has worked with Enforcement to organize the mitigation by application type.*	2, 10, 11, 16, 21,23
MITC mitigation cannot be patterned after methyl bromide. Methyl bromide is applied in more well-defined manner, the treated areas are much smaller, fewer applications are made each year and multiple grower applications in the same area are highly unlikely. *Response: Many commenters have stated just the opposite. They have said that the requirements need to be the same as the methyl bromide requirements. These measures were indeed initially loosely patterned after the methyl bromide requirements. In addition, the mitigation measures were coordinated with the VOC requirements. To add to the complexity, there are some situations where the data and use patterns require different mitigation than methyl bromide and/or VOCs. In general, we tried to be consistent with existing regulations. However, where hazards warrant, we will tailor the requirements to mitigate the hazard.*	9

A lot of these restrictions on acreages seem to be coming from a VOC standpoint rather than from a worker protection standpoint. From a worker protection perspective, what is the purpose of restricting the size/scope of the applications? *Response: WHS participated in the development of the VOC regulations, and believes that the MITC mitigation must be internally consistent with the VOC regulations. However, there will be differences as the MITC mitigation is based on field monitoring, illness data, field observations and previous experience. The reason for limiting size/scope of the application is to limit the total amount of metam applied and thus limit the amount of MITC that can come back out of the application site and potentially move into areas where people work, live or play.*	9, 21
Did DPR intend the mitigation to supplement mitigation that will appear on metam and dazomet labels? *Response*: *DPR's mitigation requirements will be a supplement to label language. However, since DPR's intention is to have our mitigation measures in place as soon as possible we are moving forward with our package of mitigation measures. This will provide protection against offsite movement until EPA's measures take effect. EPA will have some mitigation measures in place in December 2010, with others (such as buffer zones and emergency preparedness measures) in place on labels in 2011. Once EPA's measures have taken their final form, DPR will determine the impacts on our mitigation measures and what changes we need to make.*	4
Does DPR plan to add other measures at some point for further protection of workers and handlers? *Response: DPR's plans for additional mitigation are spelled out in the Risk Mitigation Directive (http://www.cdpr.ca.gov/docs/emon/pubs/mitc/dirctv120202.pdf).*	4
The MITC odor threshold (0.2 to 8 ppm) is significantly higher than the acute REL of 22 ppb. Is odor detection a health-protective means of determining off-site exposure, especially for persons with compromised respiratory function? Will DPR consider requiring the use of monitoring devices should reliable devices that are practical for field use become available in the future? Since the breakdown of MITC in the environment results in measurable air levels of hydrogen sulfide, DPR should explore the feasibility of measuring hydrogen sulfide as a surrogate for MITC. *Response: DPR is also concerned that odor detection and/or eye irritation is not a health-protective means of determining off-site exposure. However, there are no field detection methods currently available that are sensitive enough to detect off-site movement of MITC. Although there is a colorimetric method on the market for determining MITC, DPR field testing demonstrated that it was not useful for detecting off-gassing MITC. DPR will research and field test monitoring devices as they become available, and will explore the viability of using hydrogen sulfide as a surrogate for monitoring MITC.*	4, 15

Did DPR consider weather criteria such as presence of or prediction of weather conditions that would increase potential for off-site movement of MITC? Is the purpose of monitoring air temperature, wind speed and wind direction described somewhere? Does DPR anticipate providing guidance relating to these measurements or what role they play? *Response: DPR considered weather criteria when developing the mitigation measures. Generally speaking, inversions that affect off-site movement are difficult to predict. DPR is limiting nighttime applications as a means to reduce the chance of applying during inversion conditions. The purpose of monitoring air temperature, wind speed and wind direction is to provide a "heads up" of changing conditions that could result in MITC movement toward populated sites. We will provide guidance and training as we put these mitigation measures into place.*	4
Requirements for applications should be given in easily calculated and verified requirements when possible. Requirements difficult for inspectors to verify should be avoided if possible (i.e. "proof of sufficient soil for capping purposes", "3 pounds per square inch pressure throughout the entire field", and "low pressure booms with nozzles"). These requirements would be difficult to verify. *Response: DPR worked with Enforcement staff to clarify language in the final suggested permit conditions language and to ensure enforceability.*	10
Monitoring record-keeping time lines should be 2 years just like all other pesticide records. *Response: DPR agrees and made this change.*	11
Why is the term "employee" used in several instances in the document instead of "persons involved in application (i.e. the grower/permittee)? *Response: The term "employee" is used in three areas of the mitigation document. The first area is in the Control Plan, where "employers" and "employees" refer to persons that must be trained, and to use personal protective equipment. The Monitoring Requirements section requires a trained employee to be present during the application and for specified periods during post-application monitoring. The third use of "employee" is in the definitions of sensitive and standard areas, where "employee housing" is used as an example of occupied structures. DPR has reviewed the uses of the term, and has decided not to change it in the final mitigation document.*	11

Historical exposure illness incidences have been a result of misuse of metam sodium and metam potassium products. DPR should enforce existing law and penalize those acting unlawfully as opposed to prescribing new draconian rules for all products. Buffer zones constructed in part to prevent exposure due to misapplication will be unnecessarily conservative for the vast majority of proper applications. *Response: These mitigation requirements are not based on illnesses that were the result of misuse. There have been several illness incidents that occurred during and following legal applications. When DPR developed these mitigation measures, we took into account the circumstances of these exposure incidents, in addition to air monitoring data during and following legal applications, field observations and our risk assessment conclusions.*	16, 23
Can CAC use their existing metam permit conditions and disregard DPR's? *Response: Yes; CACs can include controls they have previously adopted that have successfully limited off-site movement of MITC.*	9, 21
Some of the additional proposed mitigation measures outlined in this proposal appear to be excessive, such as unnecessary paper work and redundancy in precautionary methods, and will place a great burden on the applicator. Although Certis USA agrees with the Department that the health and safety of the uninformed bystander is of critical importance when issuing permit conditions for the application of Dazomet, Metam Sodium, and Metam Potassium, historical data should be taken into consideration when requiring certain information before application begins. Of the millions of pounds of soil fumigants used each year, the reported adverse incidents involving bystanders have been few and the adverse effects transient. *Response: DPR has gone through several iterations in developing these mitigation measures to control bystander exposure. DPR has the duty to protect all bystanders from even "transient effects. In this instance the exposure levels capable of causing irritation occur at levels lower than more severe adverse effects. The information provides an indication of exposures at which no adverse effects can be expected, and has guided our conclusion that adequate public health protection is achieved if mitigation measures prevent the onset of irritation. We have indeed considered the historical data and that has guided us in the development of these mitigation measures.*	25
Where does it list the permissible activities within the buffer zone? I couldn't find any reference in the draft or the compendium. *Response: The only activities allowed in the buffer zone are fumigation handling activities.*	28

What is the definition of application rate? Is this the rate per broadcast acre or treated acre? The term application rate usually refers to the quantity coming out of the hose whether hoses are placed in a broadcast manner or in a bedded manner across the field. *Response: Application rate is the broadcast application rate or what is applied to the whole acre.*	26
Pre-Application Requirements	
In Kern County, PCAs currently indicate sensitive areas and occupied structures on their written recommendations. Also, pre-application site inspections performed by county biologists note these areas and structures as well. *Response: The requirement for a map or description of occupied structures is intended to help CACs throughout the state with their review of the proposed application. During site inspections small occupied buildings may be missed, etc. A good map of the area around the field to be treated is essential in evaluating whether the application can take place and if other mitigation measures are needed.*	9
Why is a map of all occupied structures ½ mile or less from the application site required? There are no ½ mile buffer zones to occupied structures. A map of all occupied structures within ¼ mile would be more than sufficient. *Response: DPR used ½ mile as the greatest distance that a buffer zone could extend. There are ½ mile buffer zones in the mitigation document.*	9, 21
The proposed requirement to apply 0.20 inches of water "immediately prior to application" could cause reduced penetration of water at the time of application depending on soil type. In addition, if a shank application is "mudded-in", the shank "chimneys" may not fill in, and might result in additional off-gassing. The current label requirements of 60 to 80% of field capacity at the time of application are adequate. *Response: This requirement is only for sprinkler applications beginning no earlier than 1 a.m., and was one of the parameters of the study submitted to support this application. Both this mitigation document and the VOC regulations will only allow nighttime applications if they are made under the same conditions and with the same requirements as were used in the studies submitted to allow exemptions to nighttime applications.*	16, 23

The Pre-Application Requirements state that buffer zone information must be submitted with the Notice of Intent. Does this mean the buffer zone size? *Response: Yes, buffer zone size and duration must be submitted with the Notice of Intent. DPR clarified that in the final suggested permit conditions.*	4
Notice of Intent	
For the requirement that proof of sufficient water availability needs to be submitted with the NOI, what is considered proof? Would the water order be sufficient? Would a statement to that effect suffice? Who decides if there is enough water available? How is sufficient soil proven? *Response: Adequate proof includes any document or statement of fact that shows the grower has enough water(or soil) to cover post-water requirements and the possible need for water to control excess release from the field (MITC Control Plan).*	8, 9, 14, 21
Block needs to be defined. The number of post-application water treatments is given by the fume code on the Pesticide Use Report. *Response: The term "block" has been changed to "application block" in the final suggested permit conditions. Application block is defined in 3 CCR 6000. Prior to the application, the CAC must be provided with the number of post-application water treatments to be made. The Pesticide Use Report is not part of the MITC mitigation pre-application process.*	9,21
The proposed requirements would require a grower to submit 8 additional pieces of information to the CAC prior to receiving approval for an application. This will create a problem for the growers and commercial applicators that use computer programmed NOIs. Does DPR intend to provide a new NOI form, or are the users to create a new system/document for submission of the required information? *Response: DPR does not believe a new NOI form is needed. The additional information that needs to be submitted with the NOI can be submitted electronically as an attachment to the NOI. Proof of water (or soil) availability can be submitted electronically also. Growers and commercial applicators that use computer programmed NOIs will need to develop their own forms.*	23
The NOI should be submitted 72 hours prior to any application. This gives the CAC an opportunity to adequately review the NOI and removes the possibility that an application would occur on a Sunday without review of the NOI by the CAC. *Response: The CACs can require NOIs to be submitted 72 hours prior to an application if they need additional time to review the NOI.*	24

The four hour window for application times poses a problem for growers and PCAs when they are evaluating sites and writing written recommendations. It is very confusing to ascertain whether a specific site has application rate restrictions, acreage limits, and timing of application requirements based on method. *Response: DPR feels that it is important to know when a fumigant application will occur, as there are factors that must be considered by the CAC, such as if a school will be in session, or if all the appropriate post-application water treatments can be completed.*	25
For the requirement that *"The certified applicator's 24 hr contact telephone number" be submitted with the NOI, d*oes this include a Private Applicator Certificate holder? *Response: Yes, this includes a Private Applicator Certificate holder.*	27
MITC Control Plan	
Who provides the annual training and how will it be administered? Has DPR considered ways to combine some of this training information with the training EPA's RED requires? Does DPR plan to review and approve training materials and plans? Recommend that stewardship training must be attended by each handler, supervisor and permittee prior to using metam sodium, metam potassium, or dazomet. *Response: 3CCR 6724 requires annual training of all pesticide handlers. In addition, 3CCR 6724(f) also specified who is qualified to provide handler training. Currently, the registrants provide training for metam sodium/metam potassium applicators. The new federal labels will basically not increase training requirements over what is currently in place in California. Generally, DPR does not review and approve the training materials and training plans and we do not plan to change that for as part of these mitigation measures*	4, 24
Is the Control Plan only required when applications are less than ½ mile from bystander or occupied areas? *Response: Yes, this is correct. In addition, we have excluded the requirement for a Control Plan for drip, spray blade with soil cap, and power mulcher with soil cap, and rotary tiller applications unless they are within ¼ mile of a school, daycare facility, or preschool property when school is in session, or is scheduled to be in session while the buffer zone is in effect. However, once the revised fumigant labels are in effect, EPA requires that a Fumigant Management Plan be completed for each fumigated site.*	4

If the operator of the property is not involved in the application, the applicator should be responsible for providing a copy of the Control Plan to the Pest Control Business. If the grower is responsible for post-application monitoring, then the Control Plan should be the responsibility of both parties. *Response: DPR has revised the suggested permit conditions to require the Control Plan (or California Fumigant Management Plan) to be onsite. . Supplying copies of the Control Plan is the responsibility of the operator of the property. However, through written agreement, contract or other mechanism, the property operator can have the applicator supply necessary copies.*	11
The Control Plan requires the employee to be at the field site continuously during the application and during post-application monitoring, whereas under Field Monitoring requirement is to monitor every hour or two hours and does not specify continuous presence. *Response: A trained employee must be at the site continuously during application. For post-application monitoring, a trained employee must be at the site continuously from one hour before sunset through 1 hour after sunset, in addition to the periods required to conduct the required post-application monitoring. DPR added wording to make this clear in the final suggested permit conditions.*	11
On page 4, the statement "To respond to off-site movement of MITC, the operator of the property must have one of the following capabilities:", and is followed by four bullets. Only one of the bullets would apply to each application, correct? Is the bullet that outlines the requirements for the nighttime applications applicable if the treated field is greater than 1 mile from any structure. Why is less water required for "sensitive" areas than for "standard" areas? Is the soil cap option an available substitute for any area, either sensitive, bystander, or standard? *Response: Yes, only one bullet would apply. The operator of the property would need to determine which situation is applicable. The MITC Control Plan contained language requiring that the operator of the property has water or soil available to respond to offsite movement unless he/she is one mile or greater from occupied structures. This is an error, and should state ½ mile from bystander or occupied areas. We made the correction in the final suggested permit conditions. Both the "sensitive" and "standard" areas should require the same amount of water. This is an error that DPR corrected in the final suggested permit conditions.*	4
What about individuals that do not fall into the definition for occupied structures or bystanders? Water applications to mitigation off-site movement should be required regardless of the isolation of the fumigated field. *Response: DPR agrees that there may be situations that would require water applications that are exempted by this document. Based on local conditions, the CAC can require water applications in these situations.*	11

The summary and monitoring forms appear to cover much of the same information the EPA is requiring. DPR and EPA should discuss how to combine their forms. *Response: DPR agrees with this comment, and has worked with EPA on how to combine forms DPR has developed a California fumigant management plan, which incorporates EPA and DPR summary and monitoring requirements.*	4
Because eye irritation occurs at a lower concentration than odor awareness, has DPR considered using eye irritation in addition to odor as a trigger for Control Plan implementation? *Response: DPR agrees that eye irritation is an important symptom that should trigger Control Plan implementation, and will emphasize this in the training.*	4
Clarification is needed for the statement "This is not required if the application is 1 mile or greater from occupied structures." Which situations and methods does this apply to? Would this also eliminate the need for post water treatments? *Response: This statement is related to the requirement to have irrigation equipment and water (or soil as an alternative) available to respond to off-site movement of MITC during or after an application. In the final suggested permit conditions, DPR changed the distance from 1 mile to ½ mile, and exempted drip, spray blade with soil cap, power mulch with soil cap and rotary tiller applications from this requirement; it applies to all other application methods.*	10
For applications in standard areas, irrigation equipment and water must be available for 24 hours post application. This is not required if the application is 1 mile or greater from occupied structures. It is very time consuming to survey a 1 mile radius for each application. Most applications will have an occupied structure within 1 mile. Remove occupied structure from definition of sensitive area OR reduce this distance to ½ mile. *Response: DPR agrees and has reduced the distance to ½ mile in the final suggested permit conditions.*	9, 21
If water is not available and a 3 inch soil cap is used, what is the duration of the buffer zone? *Response: Soil caps can only be used with certain application methods. The duration of the buffer zone is 24 hours for these methods.*	21

Reviewing 1,000 to 2,000 plans prior to approving applications will create a huge workload on the CAC. The grower will probably rely on PCAs to develop these plans, and then multiple people will be required to ensure that a number of copies of the plan are distributed, resulting in substantial time and administrative costs. *Response: Although DPR agrees that MITC mitigation will increase the workload for the CAC, we do not think that it will be to the extent mentioned in this comment. When required, the MITC Control Plan (or California Fumigant Management Plan) only needs to be onsite during the application. Once the revised fumigant labels are in effect, EPA requires that a Fumigant Management plan be completed for each fumigated site (the California Fumigant Management Plan can be used in place of EPA's Fumigant Management Plan). The intent of both the Control Plan and the Fumigant Management Plan is to be prevent incidents rather than to react to them. We recognize that prevention often takes more time up front, but will save a lot of resources, bad press, and most importantly, prevent illnesses.*	23
Application Restriction Near Schools	
½ mile restriction should be extended to other sensitive sites where evacuation is difficult, including day care centers, hospitals, convalescent homes, prisons and farm labor camps. The requirement should apply any time school grounds are expected to be occupied, such as during after school sporting events. *Response: DPR has included day care centers and preschools (as defined in the Health and Safety Code 1596.76) in the ½ mile restriction for schools, as all schools can be expected to have children playing outside during the time that school is in session. However, we have not expanded the requirement to include weekend activities. There are typically less people attending weekend activities than are present during the school day and there are typically more adults present during weekend activities, along with more vehicles on site. This would make evacuation a simpler process as compared with the task of evacuating a school full of children during the school week. The other sites are all included in the definition of sensitive site and are offered protections in that manner.*	1, 4
The requirement for post-application water treatments for fields within ½ - 1 mile from a school will push the material out of the top several inches of soil and negate the purpose of the treatment (nematodes and shallow plant pathogens). Alternate approach would be to have lines in place, and require post-application water treatment only if off-site odor is detected. *Response: These mitigation measures are designed to be preventative rather than reactive. Usually by the time we detect odor, all we can do is try to limit the off-site movement and limit exposure rather than prevent exposure. The watering requirements are based in air monitoring following applications, illness data, field observations and previous experience.*	3

Are the kinds of schools defined, e.g. K-12? Are universities included? *Response: DPR added a definition for schools. The definition of school is an institution for the instruction of children from kindergarten through high school. Also included are daycare centers and preschools (as defined in the Health and Safety Code1596.76).*	4
Follow post-application water treatment requirements for sensitive areas for all applications made ½ - 1 mile from the perimeter of school property. (while school is in session OR when made in a sensitive area (includes occupied structures). Does this mean that only 1 application can be made in a 24 hour period w/in ¼ mile of an occupied structure and be limited to 25 ac.? Applications will be limited to 25 ac. when within ¼ mile of an occupied structure. Too restrictive. Occupied structure should be removed from the definition of sensitive area. Very difficult to track multiple applications within ¼ of occupied structures w/in 24 hr period. *Response: No applications are allowed closer than ¼ mile from a school while it is in session or scheduled to be in session while the buffer zone is in effect. However, drip, spray blade with soil cap, power mulcher with soil cap and rotary tiller applications, when made to 5 acres or less, can be made up to ¼ mile of a school property when school is in session or is scheduled to be in session while the buffer zone is in effect. For all other methods, applications cannot be made closer than ½ mile to a school in session or scheduled to be in session while the buffer zone is in effect. Clarification was made in the final suggested permit conditions. DPR chose to leave occupied structure in the definition of sensitive area, as occupied structures are a major determining factor in determining if a site is sensitive or not.*	9, 21
Is the 25-acre maximum within a 24-hour period intended to be in place at all times, or only when school is in session? No mention is made about restrictions to applications which might take place in an area less than ½ mile from a school when not in session. *Response: The 25-acre maximum for sprinkler applications is intended to be in place when school is in session, or is scheduled to be in session while the buffer zone is in place, or when the application is made to a sensitive area. All applications (with exceptions of drip, spray blade with soil cap, and power mulcher with soil cap, and rotary tiller applications) are prohibited within ½ mile of a school property when school is in session, or is scheduled to be in session while the buffer zone is in effect. Conversely, if school is not in session, and will not be in session for the duration of the buffer zone, the application can occur.*	3, 9

A particular exception would appear to allow certain applications close to a school or sensitive area. For example, if an application is tarped, would treatment be allowed with a buffer zone of only 100 feet to a school in session? *Response: There is no exemption to allow any applications within 100 feet of a school, unless that school is not in session and will not be in session for the duration of the buffer zone. The exception you are referring to is an exemption to post-application water treatments, not application near schools. However, DPR has reduced the ½-mile restriction to ¼-mile for drip, spray blade with soil cap, and power mulcher with soil cap, and rotary tiller applications of 5 acres or less.*	9
Are drip tape and rotary tiller applications required to follow MITC Control Plan post-application water capability requirements for sensitive sites when applied at ½ to 1 mile from a school in session? Drip tape applications have been shown in past DPR monitoring results to have minimal off-gassing. The treatment area when using drip is considerably less than other methods. *Response: DPR determined that because air monitoring has shown low emissions using these types of application methods that the MITC Control Plan is not needed for the following application methods: drip, rotary tiller, spray blade with soil cap and power mulcher with soil cap. That change has been made to the final suggested permit conditions. However, once the revised fumigant labels are in effect, EPA requires that a Fumigant Management plan be completed for each fumigated site.*	10
The California Food and Agricultural Code Section 11503.5 allows a CAC to prescribe conditions for any pesticide application within ¼ mile of a school in session. There are additional civil penalties in FAC Section 12999.5 that require the CAC to impose a fee for processing and monitoring each subsequent pesticide application that may pose a risk of pesticide drift within ¼ mile of a school. These fees can be imposed for every application until 24 months have passed without any serious violation occurring. These codes provide schools adequate protection. *Response: DPR evaluated many data sources to determine that schools may be at risk. Air monitoring, off-gassing, and illness data all suggest that schools may be at risk at distances greater than ¼ mile. This set of mitigation requirements are designed to be preventative rather than reactive.*	16

The ½ mile restriction will negatively affect small drip/tarped bed metam applications. It appears that small acreage has not been addressed. It is common practice to fumigate less than 5 acres in San Diego County. *Response: DPR has reduced the ½-mile restriction to ¼ mile for drip applications (as well as for rotary tiller, spray blade with soil cap and power mulcher with soil cap applications) of 5 acres or less. From 1992 through 2007, there have been no reported illnesses related to offsite movement of MITC from drip applications. To evaluate the possible offsite movement of MITC from small acreage fields, DPR reviewed illness incidents that occurred during or after sprinkler applications to 5 acres or less. In the one incident, a total of 15 acres was treated over a two day period using a sprinkler application; each application was 5 acres. One hour after the third application, persons living within 40 feet of the treated fields detected an odor and experienced symptoms. DPR realizes that there are significant differences in off-gassing from sprinkler and drip application methods. We consider the potential for offsite movement of MITC to be greater with sprinkler applications than with drip, and think that ¼ mile (1320 feet) will provide adequate protection.*	19
Dazomet granules are mixed into soil piles and tarped. Since soil piles seem to not be addressed, does this mean that they don't fall into these requirements? *Response: The final suggested permit conditions do not cover treatment of soil piles.*	19
Sprinkler applications should be limited to a maximum of 20 acres within a 24 hour period when made within ½ to 1 mile from the perimeter of school property or when made in a sensitive area; limit the applications to a maximum of 40 acres within a 24 hour period in a standard area. This is easier to manage the application as well as the post-application monitoring requirements. *Response: The current acreage limitation is based on air monitoring data. The CAC has the authority to further limit the acreage treated based on their knowledge of local conditions.*	24
Further Prohibitions on Sprinkler and Shank Applications	
Should include additional prohibitions on sprinkler and shank applications on days when an atmospheric inversion is in effect or has been forecast. Also should prohibit applications on "No Burn" and "Spare the Air" days. *Response: The restrictions on nighttime applications are designed to eliminate the need for depending on predictions of inversions. Limiting applications when there is a significant chance of an inversion will limit the chance for off-site movement and illness. The limited nighttime applications that are allowed are based on data submitted under very specific application conditions. Applications can only be conducted under the specific application conditions monitored.*	1

Why is a 50-acre restriction necessary? If an application is a great distance from a sensitive area, why is an acreage limit required? Where is the danger? *Response: The suggested permit conditions are designed to be preventative. By limiting the acres treated we are limiting the amount of MITC that can escape from the field. That said, the CAC can include controls they have successfully used previously. If the commissioner determines that the nearest sensitive area is so far away that there is no danger from offsite movement from a treated field, he/she can allow more than 50 acres to be treated.*	9, 14
The 12-acre maximum acreage limitation for 4 am start sprinkler applications is extremely restrictive. A maximum of 12 acres can be treated within what time period? What is the basis for the 12 acre limitation? If the intent is to mitigate off-site exposure to MITC, what better time to make applications than at 4 am. The average irrigation set is 15-18 acres. *Response: DPR changed this to a maximum of 25 acres treated in a 24-hour period because of the problems with the irrigation sets. Typically, there is minimal air movement during still pre-sunrise conditions. Once air movement increases around sunrise, any MITC that has escaped from the treated soil will move offsite. Since any of the illness incidents that have occurred in the past have been from applications completed or ongoing near sunrise we are still requiring the application to be conducted over an extended period of time to limit the amount of MITC available during the time around sunrise. The purpose of the acreage limitation and the extended application time is to limit the total amount of MITC available to move offsite around sunrise.*	9
Buffer Zone Size	
It is not appropriate to combine metam sodium and metam potassium into one buffer zone table without incorporating a correction factor. The buffer zone determinations are based on the potential MITC emission rates. Because of the different molecular weights of the sodium and potassium salts the application rate needs to be corrected before determining the correct buffer zone distances. *Response: DPR agrees with the comment. A footnote has been added to the buffer zone tables that the buffer zones can be multiplied by 0.9 to get buffer zone distances for metam potassium*	23

Concerned that the minimum buffer zone was reduced from 500 feet to 100 feet. Although modeling showed that the smaller buffer zones are adequate, air monitoring should be done to verify the model. *Response: The buffer zones were based on air monitoring data from many different applications. A model was applied to determine buffer distances for various application rates and acres treated. Then an additional 25% was added to the modeled distance to address potential peak concentrations. The buffer zone distances were then compared to distances found in past illness investigations. Based on the above information, DPR determined that the 100' minimum is adequate.*	1
Buffer zones should not be the primary mitigating risk measure. Application practices such as soil preparation, establishing proper soil moisture, soil sealing using cultipackers or depth of injection significantly impact emissions. *Response: DPR agrees that buffer zones should not be the primary mitigating measure. The final suggested permit conditions include not only the application practices mentioned by the commenter, but also restrictions on when applications can be made, limitation on application block size and maximum application rates. This total package of mitigation measures is designed to keep off-gassing to acceptable levels.*	3
How were the distances in the buffer tables derived? Are there modeling runs, assumptions, descriptions of risk management factors that were weighed to achieve the distances in the buffer tables? There should be more transparency in how the values listed in the buffer zone tables were determined. The buffer zone distances are larger than necessary and do not comport with the wide experience that is reflected in the field applications. *Response: The target concentration is 220 ppb as an 8-hour time-weighted average. Buffer zones were developed using the PERFUM model for applications of 40 acres and less, and the FEMS model was used for applications to fields greater than 40 acres. PERFUM buffer zones were developed as single maximum direction; FEMS buffer zones were developed using 5000 runs to determine the distributions. Then a 25% factor was added to each modeled buffer zone distance to address peak concentrations. The buffer zone distances were then compared to distances found in past illness investigations to ensure they would be protective.*	4, 15, 23

According to the 2009 Draft Risk Characterization Document for Methyl Iodide, DPR does not favor the use of the PERFUM model because it does not control the per application buffer zone failure rate. Has DPR recalculated all of the buffer zones using a different model? Was the methodology for developing the previous buffer zones harmonized with the methodology for determining the new buffer zones to ensure consistency? *Response: DPR has used a screening method since 1992 to calculate fumigant exposures. Because of the long history of use, screening methods used at DPR are well understood and characterized. In fact, the document "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised (EPA-454/R-92-019)" is currently on the U.S. Environmental Protection Agency (EPA) Support Center for Regulatory Atmospheric Modeling Web site at: <http://www.epa.gov/scram001/guidance_permit.htm>. This document includes methods for estimating screening level air concentrations for area sources and has an update that specifically applied to screening estimates for area sources at: <http://www.epa.gov/scram001/guidance/guide/scrupd.pdf>. Thus, it is still a U.S. EPA accepted method. Screening methods are reasonable worst-case estimates. However, DPR does frequently use the PERFUM (for fields 40 acres and less) and the FEMS model (for fields between 40 and 80 acres) for calculating buffer zones.*	15
Drip, rotary tiller, and flood buffer zone tables can and should be reduced in size. Rotary tiller applications have been done for the past 18 years, with applications within 25 feet of occupied structures with no illnesses. In addition, rotary tiller monitoring data supports shorter buffer zones. *Response: Based on air monitoring data, illnesses, and observations DPR has determined that a minimum 100-foot buffer zone is required regardless of application method. The county agricultural commissioner has the ability to shorten the buffer if he/she has mitigation measures that have prevented illness in the past.*	10, 17
For the rototill and roll method of application, how did DPR come up with the 100 foot buffer zone? Is there evidence that a 100 foot buffer zone is needed? *Response: Based on air monitoring data, illnesses, and field observations DPR has determined that a minimum 100-foot buffer zone is required regardless of application method. The county agricultural commissioner has the ability to shorten the buffer if he/she has mitigation measures that have prevented illness in the past.*	18

Buffer zone size should be reduced for applications to 5 acres or less. *Response: Based on air monitoring data, illnesses, and observations DPR has determined that a minimum 100-foot buffer zone is required regardless of application method. The county agricultural commissioner has the ability to shorten the buffer if he/she has mitigation measures that have prevented illness in the past.*	19
According to DPR Environmental Monitoring Branch staff, the dazomet buffer zones would be determined using the same procedures used for metam sodium and metam potassium. All four studies would be used, but a weighted average of the flux estimates would be used depending on the completeness and degree of validity of the study. In a August 18, 2008 memo, it appears that a weighted average approach was not used. Certis believes that the data were not properly interpreted in developing the final buffer zone recommendations, and would like the opportunity to conduct independent evaluation and calculation of buffer zones based on the flux values. In addition, there are no reductions in buffer zones for the use of multiple water treatments, even though watering is required for at least three days after treatment. *Response: Buffer zones were determined using the four submitted studies: Dinuba surface application, Dinuba incorporated application, Manteca application, and Watsonville application. You are correct that the weighted average approach was not used to determine the flux estimate used for buffer zone modeling. Rather, buffer zones were derived from each study, using weather data from Ventura and from Bakersfield. WHS then took the mean from the four studies and increased each distance by 25% to account for emission peaks that may occur after application. This is the same procedure we followed for metam sodium and metam potassium buffer zone calculations. There are no reductions in buffer zone distances for use of multiple water treatments. It is our understanding that all label-required post-application water treatments were applied during the studies. The water treatments would have reduced the flux; this is already reflected in the buffer zone determinations.*	25
Buffer Zone Duration	
What are the 24-hour buffer zone durations based on? Is the rationale for the buffer duration explained somewhere? Why does the buffer have to be maintained for only 24 hours post-application on drip/sprinkler/shank and 48 hours on flood? *Response: The buffer zone durations are based on the flux data that was used to model the buffer zone distances. Typically, some application methods showed a peak in field emission around sunset on both the first and second day following application. These methods were given a 48-hour buffer zone duration. Other methods showed a peak in field emission only on the first day following application. The buffer zone duration for flood applications has been changed to 24 hours in the final suggested permit conditions.*	4, 8

The first four tables lack footnotes. *Response: DPR made the corrections in the final mitigation document.*	11
If post application monitoring is required for 12 hours near schools and sensitive areas, why are buffer zones in effect for 24 or 48 hours? *Response: Each of these time periods is for a specific purpose. The intention of post application monitoring is ensure that something doesn't go wrong during the application and for the 12 hours after the application is complete. Based on air monitoring data, the peak flux typically occurred within 12 hours of the application. Buffer zone durations are based on the flux data that was used to model the buffer zone distances. Depending on the method of application and the post-application treatment used, there can be a peak in field emissions the first and second day following application. The buffer zone duration is intended to keep people away from treated fields during the period when a field emission flux might occur.*	21
"Buffer zones remain in effect for 24 hours after the completion.....when: Rotary tiller application methods are used (includes spray blade with soil cap, <u>power mulcher</u> <u>and soil cap application methods</u>)." Does this mean <u>any</u> soil cap application method or only power mulcher <u>with</u> soil cap? What is the buffer zone duration for shank applications using a soil cap? *Response: With the exception of applications using one post-application water treatment, buffer zones remain in effect for 24 hours for all application methods.*	27
Buffer Zones Extending on Adjacent Property	
The mitigation reads "Buffer zones may not extend into properties of occupied structures or bystander areas". This should be changed from "may not" to "cannot" or "shall not". *Response: DPR agrees and has changed the language to "shall not."*	7
Page: 19 Can the buffer zone extend into a property that contains a bystander area? *Response: A buffer zone can extend up to a clearly specified boundary of property with an occupied structure if advanced permission is obtained from the property owner/operator. Also, the CAC may approve buffer zones that extend across transit sites, such as streets or highways. However, the suggested permit conditions do not have an exemption allowing buffer zones to extend into bystander areas.*	22

Opposed to allowing buffer zones to encroach on adjacent property, even with permission. But if this is allowed, must have the agreement in writing and for a specific time in order to be enforceable. Buffer zone should be posted at perimeter so that neighboring property owner will know what area needs to be kept unoccupied. *Response: The operator of the property to be treated is responsible for documenting how the operator of the adjoining agricultural property will keep his workers from entering the buffer zone. DPR has added the requirement that the operator of the property to be treated must document this agreement and submit it with the NOI. With such an agreement, posting of the buffer extending into neighboring property is not necessary.*	1, 8
Buffer zones should not be allowed to extend across transit sites in residential neighborhoods, which are main points of entry or exit for areas where children can play. If they are allowed to extend across other roadways, they should be posted because slower-moving pedestrians and cyclists can have considerable exposure as compared with automobile drivers. *Response: DPR used 220 ppb over an 8-hour period as the target value for modeling buffer zone distances. As an additional margin of safety, DPR increased these modeled buffer zone distances by 25%. Any transit site included in a buffer zone will necessarily be on the outer edge of the residential area as buffer zones cannot extend onto residential property. Transit activity, even for slower-moving pedestrians and cyclists, will be of a short duration, and would not result in exposure to levels of concern. DPR does not see the benefit of posting transit areas.*	1
Bike paths that traverse through farm properties would be considered bystander areas unless the CAC is allowed to approve as a transit site. *Response: DPR considers bike paths to be transit sites.*	2
Documentation is good but in many cases, the applicator might not have any control over the other grower's worker. There needs to be provisions requiring property operators to post buffer zones on their own property and to keep field workers out of their own fields if those fields fall within buffer zones. *Response: The operator of the property may post his treated field and the buffer zone, as long as the buffer zone is on his property. In addition, DPR has regulations in place (CCR 6618) that require the operator of the property to be treated to notify his employees that will be within ¼ mile of the field to be treated that an application is scheduled to occur. If the buffer zone extends onto his neighbor's property, the operator of the property and the neighbor must come to an agreement to allow the buffer zone to extend onto the neighbor's property. The agreement must also include how the neighbor will keep all of his workers out of the buffer zone. DPR has included the requirement that documentation of this agreement must be submitted to the CAC with the NOI.*	1, 11

There is no provision which would allow buffers to extend onto non-agricultural property if there is an occupied structure or bystander area anywhere on that property? Is this correct? Does this include public property? Our concern should be the activities on any adjoining property, not the description. Strongly oppose not allowing buffer zones to extend beyond the property line where an occupied structure or bystander area is located. In rural areas the occupied structures could be on the opposite side of a property from where an application would occur. *Response: DPR changed the wording in the final mitigation measures to read: "The buffer zone is measured from the perimeter of the application block to the closest point of the occupied structure's property line. Buffer zones shall not extend into properties of occupied structures or bystander areas." However, the suggested permit conditions contain an exemption that states: "If advanced permission is obtained from the property owner, operator or legal resident, the buffer may encroach onto the property of an occupied structure up to a clearly specified boundary. Documentation of this agreement must be submitted with the NOI.*	4, 7, 11,16
In situations where adjacent property owners cannot be identified, there should be some type of acknowledgement by the CAC of efforts to contact the owner. If the applicator or grower attempts to determine the owner through the appropriate county office, contacts the owner without a reply, this should be sufficient notice. *Response: If the owner of the adjacent property cannot be contacted, there is no way that he/she can assure that workers will not enter the buffer zone. Unless there is an agreement between property owners, the buffer zone cannot extend into adjacent agricultural properties.*	5
DPR does not provide legal recourse for growers whose neighbors who do not give permission because it may limit or halt normal business while exposing them to greater liabilities. Some type of government procedure should be implemented to resolve these disputes. *Response: DPR does not intend to implement a procedure to resolve disputes. An alternative would be for the property owner to treat less of his acreage, or to use a method that requires smaller buffer zones.*	5
What form of documentation will DPR accept? It would be helpful if DPR developed a buffer zone agreement document. *Response: The buffer zone agreement can be as simple as an e-mail message, or a piece of paper on which the operator of the property records what the adjacent property owner will do to keep his employees out of the buffer zone. A standard document is not required.*	10, 23

The documentation requirement for the agreement between property operators for maintaining buffers needs to be "in-Writing" and for a specific time. If it is left vague, it leaves the CAC open to argument. If it isn't addressed in these proposed conditions and left to the local CAC's extra mitigation measures, there will be no consistency and the industry will continually play county against county. *Response: DPR changed the wording in the final suggested permit conditions to read:* *"When an application requires the buffer zone to extend into an adjoining agricultural property, an agreement must be obtained. The operator of the property to be treated must document how the operator of the adjoining property will ensure workers will not enter the buffer zone. Documentation of this agreement must be submitted with the NOI".*	8
Buffer zones should be allowed to extend beyond the property line where an occupied structure or bystander area is located. Protections need to be in place to protect occupied structures and bystander areas, but using property lines does not account for homes with large acreage where the home is located far from the property line. This has the potential to unnecessarily reduce the amount of acreage that an operator is able to treat. This should be changed to read "from the perimeter of the application block to the occupied structure" to make this requirement consistent with the methyl bromide field fumigation regulations. The buffer zone should be allowed to extend onto properties, but not to the immediate "occupied area (i.e. house and yard). *Response: DPR changed the wording in the final suggested permit conditions to read:* *"The buffer zone is measured from the perimeter of the application block to the closest point of the occupied structure's property line. Buffer zones shall not extend into properties of occupied structures or bystander areas." However, the suggested permit conditions contain an exemption that states: "If advanced permission is obtained from the property owner, operator or legal resident, the buffer may encroach onto the property of an occupied structure up to a clearly specified boundary. Documentation of this agreement must be submitted with the NOI.*	7, 10, 11, 19, 23

Buffer Zone Determination...: 2nd paragraph, *"The buffer zone is measured from the perimeter...to the closest point of the occupied structure's property line."* Several properties here have labor housing on the agricultural property with no discernable "property lines" for these occupied structures. In these cases, where would the B.Z. be measured to? *Response: DPR changed the wording in the final mitigation measures to read: "The buffer zone is measured from the perimeter of the application block to the closest point of the occupied structure's property line. Buffer zones shall not extend into properties of occupied structures or bystander areas." However, the suggested permit conditions contain an exemption that states: "If advanced permission is obtained from the property owner, operator or legal resident, the buffer may encroach onto the property of an occupied structure up to a clearly specified boundary. Documentation of this agreement must be submitted with the NOI.*	27
Monitoring Requirements	
Are there any actions required in conjunction with results of the required monitoring? Who is responsible for any needed actions? Is this detailed in each permit issued by the CAC? *Response: The monitoring required during application and for 12 hours following application is intended to allow the grower or applicator to keep watch on weather conditions. If the monitoring indicates a change that could result in offsite movement (e.g. increased or greatly decreased wind speed, change in wind direction toward occupied structures) the grower or applicator should be ready to take whatever action is necessary to prevent or reduce offsite movement. DPR has added language to the final suggested permit conditions discussing actions that should be taken in response to monitoring results.*	4
How did DPR determine that monitoring 12 hours post-application was sufficient? It does not appear that DPR is establishing triggers for required actions should certain conditions or events be observed in the course of monitoring. Are there any exceptions or circumstances where post-application monitoring is not required? *Response: Based on air monitoring data, the peak flux typically occurred within 12 hours of the application. DPR has not established a trigger based on the monitoring data. The required monitoring is intended to allow the grower or applicator to keep watch on weather conditions and to respond appropriately if weather conditions develop that could result in offsite movement toward occupied structures or bystander areas. There are no exceptions to the post-application monitoring requirement. DPR has added language to the final suggested permit conditions discussing actions that should be taken in response to monitoring results.*	4

Air temperature and soil temperature should be monitored and recorded hourly during application. *Response: The CAC has the authority to require additional monitoring if they feel it is needed based on local conditions.*	24
Multiple Block Applications	
What is meant by each consecutive 2-day period? Why is it not just "the CAC will determine the buffer zone based on the total acreage? *Response: The intent of the multiple block restriction is to ensure that the buffer zone from one application is still adequate if a second application is upwind of the first application. In order to be considered as independent of any effect from a nearby treated field, the fields must be at least ¼ mile apart. If treated fields are within ¼ mile of each other, and off-gassing occurs, the result would be a greater concentration of MITC that could move off-site to nearby occupied structures or bystander areas. The consecutive 2-day period covers the longest buffer zone duration.*	11
Does the statement "The application blocks must be treated in a sequence that moves away from sensitive sites" prevent applicators from applying in a direction perpendicular to the sensitive sites? And what if there are multiple sensitive sites around a field? Moving away from sensitive sites is problematic with some irrigation system designs. With solid set irrigation pipe, placement of mainline always starts from the pump and moves away. When the pump location is opposite the sensitive site, the treatment sequence would have to move toward the sensitive site. *Response: DPR agrees that there may be situations where the application cannot move away from sensitive sites, and has changed the language in the final suggested permit conditions to say "…should be treated…".*	4, 5

Does the sentence "Application blocks less than ¼ mile apart are considered multiple blocks" mean different fields? And fields from different growers? How will the number of blocks and the acreage of each block affect a grower's ability to efficiently treat multiple areas in an economical way? The CAC would have to maintain some kind of map to identify all of the different fields that were going any one day. Buffer zones may overlap between growers, creating a situation where equipment is unavailable. Fairness issues between growers and the scheduling of their applications could cause competitive scenarios for neighboring farmers and cancel out other stewardship advances that have been made. *Response: DPR originally intended this to mean fields from different growers. However, DPR recognizes that ensuring all applications are ¼ mile from each other would put a huge workload on the CAC, in addition to making decisions that possibly putting some growers at a competitive disadvantage. DPR has changed the multiple block requirement to apply only to individual operators of a property and not across properties of different operators of the property.*	3, 8, 16, 21, 23
DPR Environmental Monitoring data supports a reduction of the time intervals included in the multiple block definition. A 12-hour interval is sufficient for rototiller applications. *Response: DPR reviewed the data that the commenter submitted (Monitoring a 1,3-Dichloropropene/Metam Sodium Application in Del Norte County), jointly conducted by DPR's Environmental Monitoring Branch, the California Air Resources Board, and the California Department of Food and Agriculture. The measured MITC concentrations dropped below 220 ppb (658 ug/m$^{3)}$ by sampling interval 7, which was 24 hours after the start of the application. We will leave the buffer zone duration as is in the final suggested permit conditions.*	17
Oppose the new definition of "multiple blocks" and its inclusion in permit conditions at this time. This concept is complicated, merits further discussion, and should be delayed until this can be properly addressed. Choosing a spacing of ¼ mile has significant impact on application timings and land use decisions. Further, the basis for choosing ¼ mile appears arbitrary. It would be more appropriate to determine the extent of any overlapping buffer zones between individual applications. *Response: A minimum separation distance between two applications must be included in the development of required buffer zones. In order for two applications to be considered independent the buffer zone for one application must still be adequate if the second application is upwind of the first application. The methyl bromide regulations require a separation of ¼ mile for two 40-acre applications to be considered independent.*	21, 23

Buffer zones based on either PERFUM or FEMS are very different if a grower were to apply 40 acres in one day, compared to applying 40 acres over the span of two days. With the proposed multiple block concept, DPR is not taking the available science into account and discouraging more environmentally friendly multiple block subdivisions. *Response: It is not apparent why fumigating a field in multiple blocks is more environmentally friendly. The same total mass of fumigant would be applied and the same total mass of fumigant would volatilize whether a field is fumigated in multiple blocks or a single block, so the environmental effects should be the same.* *The buffer zones for a multiple block fumigation may be more health-protective than a single block of the same size. This is due to lower flux on the day following fumigation, relative to the day of fumigation. To make the buffer zones for multiple blocks provide equivalent protection as buffer zones for a single block would require a major revision to the buffer zone tables. Buffer zones would be based on the acreage-weighted flux, instead of the application rate. Determining the acreage-weighted flux would involve a complex calculation. These buffer zones would be difficult for permittees to comply with and for agricultural commissioners to enforce.*	23
Application Requirements	
Who is responsible to inspect and verify that all irrigation equipment that will be used for post-application water treatment is in good working condition? Is this enforceable? *Response: The operator of the property is responsible for post-application water treatment and for inspecting and verifying that the irrigation equipment is in good working condition. This is enforceable; if the irrigation equipment fails, especially upon initiating an application, one can deduct that the equipment was NOT in good working condition.*	11
The rototiller applications should be separated out from spray blade (with soil cap), power mulcher and soil cap applications. Normal rototiller application depths are 8-10 inches evenly distributed throughout the soil. So an effective rule would be “must be incorporated to a depth of at least 6” of soil” instead of “under at least 6” of untreated soil”. *Response: DPR has separated the rotary tiller applications from the spray blade and power mulcher application methods in the final suggested permit conditions.*	17

Sprinkler Applications	
Concerned that prohibition of sprinkler applications when air temperatures exceed 90 ^{o}F was deleted. *Response: The prohibition was deleted because it is a label requirement.*	1
Are sprinkler applications that begin no earlier than 1 a.m. allowed during the remainder of the year (November through April) in ozone non-attainment areas? *Response: Yes; this is clarified in the final suggested permit conditions.*	14
During sprinkler applications in non-attainment areas one can only apply 260 lb/ac metam sodium but 290 lb/ac metam potassium is permitted. What is the basis for this decision? Does metam sodium create more MITC off-gassing than metam potassium? *Response: The maximum application rates were calculated used the difference in the molecular weights of the two materials.*	26
Shank, Rod Bar, and Spray Blade Applications	
The requirement is for a minimum size #50 mesh screen on both the fill and discharge outlets. More pressure would be needed to push product through this size screen (they need 50# pressure without a mesh screen). 40#s pressure would be needed with dual check valves installed on each outlet between manifold and discharge point. *Response: This requirement has been deleted from the final suggested permit conditions.*	2
In the requirement that "Anytime the shanks are lifted from the ground, nitrogen must be used to purge the system", nitrogen should be deleted. Compressed air is commonly used in Santa Barbara County for this purpose. *Response: This requirement is based on study parameters submitted to support the 1 a.m. shank application method and thus only nitrogen purge is allowed for this application. For all other soil injection methods, compressed air can be used to purge the system.*	7
Alternate passes would be sufficient to allow enough untreated soil for capping purposes when responding to off-site movement. Growers could do alternate passes and leave strips of untreated soil for capping purposes and follow with a compaction device if needed. This would be a more economically feasible practice in Merced County. *Response: DPR agrees that this practice would allow sufficient untreated soil for capping purposes.*	10

An application restriction of 80 acres maximum within a 24-hour period in a standard area may not be warranted. *Response: By limiting the acres treated we are limiting the amount of MITC that can off-gas from the field. That said, these mitigation measures allow the county agricultural commissioner to modify the mitigation requirements to include controls they have successfully used previously. If the Commissioner determines that the nearest sensitive area is so far away that there is no danger from offsite movement from a treated field, he/she can allow more than 80 acres to be treated.*	14
In one place the metam sodium/metam potassium delivery must be at least 6 inches beneath the field surface. In another place the purpose is to permit distribution of metam sodium/metam potassium throughout the surface 5-6 inch depth. It is this latter method that has utility relative to nematodes and is very much needed. *Response: The confusion is because we had grouped requirements for the spray blade applications (treatment is 6 inches beneath the surface) with those from the power mulcher/rotary tiller applications (incorporated into the soil to a 5-6 inch depth). In the final suggested permit conditions, we have developed separate guidance for each of the two application methods.*	26
Does the section at the bottom of page 7 (Shank, Rod Bar, and Spray Blade Applications :) and top of page 8 apply to spray blade applications WITH a soil cap? OR do we use the section on page 10 (Rotary Tiller, Spray Blade with Soil Cap ...)? *Response: The final suggested permit conditions are separated by application method, which should make it easier to follow method-specific conditions.*	28
Are there exceptions to post application water treatment(s) for spray blade applications WITH a soil cap? OR are they required to complete post application water treatments? *Response: Post application water treatments are not required for spray blade with soil cap applications.*	28
Drench Applications	
Application #2 What is the definition of application rate? Is this the rate per broadcast acre or treated acre? The term application rate usually refers to the quantity coming out of the hose whether hoses are placed in a broadcast manner or in a bedded manner across the field. In the latter scenario much less product would be purchased per acre. Please add application rate to your definition list. *Response: We use the same definition of application rate as used in the VOC regulations: rate per treated acre. This will be covered in the CAC training sessions.*	26

Night Applications	
In the VOC regulations, applications are restricted to beginning 1 hour after sunrise and completed 1 hour before sunset from May-October only. The mitigation will expand the scope to include all applications year-round. *Response: For application of metam sodium, metam potassium and dazomet, the nighttime restrictions are in effect year-round to reduce the potential for off-site exposure. About 20% of the MITC illness incidents occurred from November through April. The mitigation restrictions were developed to prevent illness incidents throughout the year.*	9, 21
Concerned about allowing 1 am night applications, since DPR scientists had some concerns with the data supporting these applications. *Response: The 1 a.m. applications must take place under very restrictive conditions (essentially under the exact conditions that were monitored).*	1
Limiting nighttime sprinkler applications to 12 acres will cause environmental and economic problems. The limitation will require multiple trips to the fields, resulting in greater population exposure and increased expense. This will cause significant problems for carrot growers who currently use earlier morning applications to protect their workers from heat exposure issues. Typically sprinkler irrigation sets exceed 12 acres and water wells produce more water than can be applied to 12 acres; excess water will be wasted. We recommend that the acreage limit and rate restriction be deleted, or raised to 18 – 22 acres as based on current practices for block size and irrigation.. DPR should allow the CAC to determine application block size based on field location and other local conditions. *Response: DPR changed this to a maximum of 25 acres treated in a 24-hour period because of the problems with the irrigation sets. Typically, there is minimal air movement during still pre-sunrise conditions. Once air movement increases around sunrise, any MITC that has escaped from the treated soil will move offsite. Since any of the illness incidents that have occurred in the past have been from applications completed or ongoing near sunrise we are still requiring the application to be conducted over an extended period of time to limit the amount of MITC available during the time around sunrise. The purpose of the acreage limitation and the extended application time is to limit the total amount of MITC available to move offsite around sunrise.*	5, 13, 16, 21, 23
Post application water treatment must be underway by sunrise. Early starts for shank applications do not always begin at 1 a.m. They may begin 1 hour before sunrise, which is allowed. Therefore, they can not complete their post application water treatment before sunrise. *Response: The post-application water treatment does not have to be completed by sunrise, but must be underway on the treated portion of the field by sunrise.*	21

The requirement to meter metam evenly over a minimum of six hours will increase exposure potential by 1/3. Commenter has found no scientific basis for extending the application time from 4 hours (Kern County) to 6 hours. Each field has unique irrigating capacity. Growers who own sprinkler pipe fitted with 1/8 inch nozzles will apply significantly more water than growers with 3/32 inch nozzles for the same pump capacity and product applied. Coupled with the 50% field capacity requirement and heavy soils and label requirement for no runoff, growers will be hard pressed to meet this requirement. *Response: Limiting the amount of metam sodium/potassium used in applications that will be ongoing around sunrise is crucial. Illness data show that many of the incidents occur around sunrise. The air is often still during the early morning hours. As MITC escapes from the soil it remains close to the ground; in the hour or two around sunrise air movement increases and the MITC moves offsite. The acreage limitation and the extended time to apply are needed to limit the amount of MITC available at this crucial time.*	5
Post application water treatment must be underway before sunrise should be changed to read "…it is recommended water treatment should begin before sunrise." Weather conditions may not warrant water treatment starting before sunrise. *Response: It is crucial that post-application water be initiated before sunrise. Flux studies have shown that typically, MITC escapes from the soil following application. As air movement increases near sunrise, the MITC is available to move offsite. We want to minimize the amount of MITC available to move offsite.*	5
Request that spray blade applications be allowed at night. Growers need at least 12 hours and would prefer 14 hours to apply with this soil-moisture dependent method. More flexibility in application timing is needed with the short fall and winter days coupled with short soil suitability windows. *Response: The current nighttime application exemptions exist ONLY because a study was conducted under very specific conditions and the data showed that the off-gassing of MITC was within acceptable levels. DPR does not have any such data for spray blade applications.*	6
Request that drip applications be allowed at night. Many large irrigation sets require at least 24 hours to complete a chemigation cycle. Drip applications have never caused an odor issue in Imperial County, unless it was from an accident where the material tank was breached or leaking. *Response: The current nighttime application exemptions exist ONLY because a study was conducted under specific conditions and the data showed that the off-gassing of MITC was within acceptable levels. DPR does not have any such data for drip application methods.*	6, 8

Early morning applications are allowed but night time applications have been eliminated. The California coastal growers apply the product at night because of the lower temperatures and to avoid bystander incidences. In the Imperial Valley during the summer months, nighttime applications are ideal. This application time avoids the daytime summer temperatures of 120 degrees that make it impossible to apply the product. Nighttime applications can reduce the chances of off-gassing. Nighttime applications are critical to the industry and they must be allowed under the regulations. *Response: Illness incidents show that many of the incidents occur around sunrise. The air is still during the early morning hours. As MITC escapes from the soil it remains close to the ground; in the hour or two around sunrise air movement increases and the MITC moves offsite. The current nighttime application exemptions exist ONLY because a study was conducted under specific conditions and the data showed that the off-gassing of MITC was within acceptable levels.*	16
For 1 am sprinkler applications, the phrase "The fumigation application must be applied at a minimum rate of 0.20 acre-inches/hour" should be deleted to be consistent with 4 am and post application water requirements. The 1 am application section should include a requirement that the metam must be metered evenly over the entire application period. This would make this section consistent with the 4 am requirements. *Response: To allow any exemptions from the ban on night time applications of metam, a study must be conducted to show reduced emissions. The 1 a.m. application conditions are those that were studied and proven to have low emissions. To make an application under this exemption the applicators must use the exact application parameters that were used in the study. The 4 a.m. exemption was also based on a study. Because of our concern about exposure around sunrise, for the 4 a.m. exemption DPR required an extended application period to reduce the amount of MITC escaping from the field prior to sunrise. Data shows that many illness incidents related to metam occur around sunrise when the meteorological conditions change from still to those with increased winds.*	7
It is unclear if the 1 a.m. start sprinkler, the 1 a.m start shank, and the 4 a.m start sprinkler have their own post application watering requirements and therefore do not have to meet the "sensitive" and "standard" area requirements. As written, these two requirements seem to be in conflict. *Response: The three night application methods require a minimum of two post-application water treatments as a baseline. If the application block falls under the definition of a "sensitive" site, then a third post-application water treatment would be required.*	23

Drip Application	
Drip tape exceptions (if any) and other exceptions should be noted throughout the document. Exceptions for buried or tarped drip tapes should be considered. *Response: DPR made some exceptions for drip applications. Those include: deletion of the requirement for a MITC control plan, and allowing applications of 5 acres or less to be made within ¼ mile of a school while it is in session. There are no available data to make exemptions for buried or tarped drip tape applications. The final suggested permit conditions are organized by application method, so it will be easier to determine exemptions for drip applications.*	10
A school was built right in the middle of the growing field of San Diego's largest tomato grower. The grower fumigates small amounts of acreage at a time (½-2 acres) utilizing the drip method/tarped beds with one water cap if needed. Under the proposed requirements, the grower would not be able to start any earlier than 1 hour after sunrise, and the buffer zone for this type of application is 48 hours. The grower would not be able to do this application when school is not in session. If the grower uses two water caps, they can get the buffer zone down to 24 hours, but that limits them to applying only on Saturday? The ½ mile restrictions are going to really affect his business. It appears that small acreage has not been addressed. It is common practice to fumigate less than 5 acres in San Diego County. *Response: Drip applications do not require post-application water treatments. DPR made some exceptions for drip applications. Those include: deletion of the requirement for a MITC control plan, and allowing applications of 5 acres or less to be made within ¼ mile of a school while it is in session. The buffer zone duration for all drip applications is 24 hours.*	19
Drip applications may not exceed 3 psi in the hoses. What about the grower with different elevations across his land? What if the grower has pressure compensating emitters within his drip hose? Shouldn't it be more important to consider the pressure or flow coming out of the drip hose than the pressure within the hose? There are some underground systems and some drip hoses where 3 psi will not accurately run the system. If this occurs the product could mostly go to one end of the field; thus uneven distribution. Why is DPR going to regulate pressure in the hoses or below ground? *Response: The reason that 3 psi was included in both the MITC mitigation and the VOC regulations is to ensure that drip lines would not leak or blow out. This requirement has been removed from the final suggested permit conditions.*	26

Flood Application	
The requirement for metam to be applied with at least 6 inches of water will not work. Using 6 inches of water per acre will result in a 40% increase in material. To reach the required soil moisture requirement, the field must be pre-irrigated with up to 8 inches of water. Metam is typically applied in 3-4 inches of water 7-10 days after the pre-irrigation. UC Extension states that fields typically don't go above 4" for any type of watering. Imperial growers apply with 4.28" water for optimum results, based on a study conducted by AMVAC in 2004. Using more than 4 inches of water during the application will exceed the water holding capacity of the soil and result in run-off. *Response: The 6-inch requirement is a condition of use from the VOC regulations and thus has been removed from these mitigation requirements.*	5, 8, 12, 13
The use of water treatments to help seal flood applications is not needed and impractical. With the high dilution of metam in the application water, it would be impossible to place irrigation systems in the flooded areas. *Response: DPR never intended to require post-application water treatments following flood application. DPR clarified this in the final suggested permit conditions.*	23
Flood applications not permitted in non-attainment areas between May and Oct. Doesn't DPR have data to indicate flood basins and drippers have less MITC off-gassing than sprinklers or shank applications. Factors more important relative to flood basins are the number of berms out across the field because the more there are the more wicking there can be into the air. The volume of available water is what determines the number of berms across the field. Why are post-application irrigations needed following basin applications? Will these post application irrigations have to be via sprinkler? *Response: Post-application water treatments are not required for flood applications. We have made this change in the final suggested permit conditions.*	26
Dazomet Applications	
The mitigation states "Dazomet must be incorporated into the field immediately after application. Incorporation can be done either mechanically or with water". In the RED, two different rates apply to either mechanically incorporated dazomet (530 for golf courses, 425 for other applications) or surface applications of dazomet. There may be some confusion about whether applying water counts as "incorporation". *Response: DPR reviewed this language and made some changes in the final suggested permit conditions to clarify.*	4

San Diego County has a grower within ½ mile of a school that mixes Basamid (Dazomet) granules into his soil piles and tarps them. The grower applies one-two 50lbs. bags for each application. Since soil piles seem to not be addressed, does this mean that they don't fall into these requirements? Applying water caps over a tarped soil pile appears to be unnecessary. *Response: The suggested permit conditions only apply to field soil fumigations. Soil pile fumigations are not covered.*	19
Do these apply as written to applications made <u>inside</u> greenhouses? *Response: No. We didn't include greenhouse applications in the suggested permit conditions.*	
Post-Application Requirements	
Which form must be used to record the air temperature at completion of application and 1 hour before sunset? *Response: DPR originally omitted those items from the proposed monitoring form and have now modified the form to include those items.*	14
Air temperature should be monitored and recorded. *Response: The CAC may require additional monitoring if they determine it is necessary.*	24
Exemptions to Post-Application Water Treatments	
Exemption #1 needs to allow for applications greater than 20 acres. 80 acres is a workable limit. *Response: Allowing 80 acres is not part of this exemption. The county agricultural commissioner may allow higher acreage limit if they have previously used controls that have worked for those higher acreages.*	2
Concerned that soil capping will be allowed in lieu of post-application water treatments without monitoring data. *Response: The exemption for soil capping is based on observations of soil capping applications and review of illness incident data. Because drought conditions are common in California, soil capping is a reasonable alternative when water is unavailable.*	1

Exemption #2 for shank applications does not specify which soil capping methods can be used. *Response: Any soil capping method can be used, as long as:* *1. metam is banded using a width of 14 inches or less;* *2. the maximum application rate is 60 pounds a.i. per acre;* *3. the injection depth is 3-6 inches; and* 4. *minimum of 6 inches of untreated soil is placed over the treated area.*	10
Is the source of the untreated soil adjacent to the applied band or pre-formed beds? If so, how will the applicators prevent accidental disturbance of the treated soil or mixing of treated and untreated soil during this procedure? *Response: The source of untreated soil can certainly be the soil adjacent to the beds. Careful techniques will prevent disturbance of the treated soil.*	15
Post-Application Water Treatments	
Concerned that the minimum water for each post-application water application was reduced from 0.25 inches to 0.2 inches. Has the efficacy of the reduced volume been tested? *Response: The post application water rates are given in ranges and depend on the soil type, soil moisture, and soil temperature (i.e., local conditions).*	1
It is not possible to complete post-application water treatments to a field 20 acres or larger in 2-3 hours. *Response: DPR and other researchers have conducted several studies of metam applications. In many of these, post application water was completed in that timeframe. It is important to get water on in a fairly short time frame and at the appropriate time periods. If that is not possible for a particular field, the acreage may need tot be reduced to ensure the appropriate amount of water can be applied in a timely manner.*	2
Orchards and vineyards often need a low-rate (less than 1 gallon/acre) application of metam to improve the performance of 1,3-D. Would this require a post-application water treatment? *Response: Yes, unless one of the conditions that exempt post-application water treatments are met.*	3
Do the post-application water requirements apply to flood and drip applications? *Response: Flood and drip applications do not require post-application water treatments. After drip applications, the drip system must be flushed with a volume of water at least three times the volume of the mainline and laterals of the drip system. This has been clarified in the final suggested permit conditions.*	8

The mitigation document should specify which conditions require post-application water treatments and how the post water applications can be applied. *Response: In the final suggested permit conditions, we have developed separate guidance for each application method, making it easier to determine what is required for a specific method.*	10
The requirements to determine 2-3 water applications are very confusing and require more explanation and guidance for CAC staff. *Response: In the final suggested permit conditions, we have developed separate guidance for each application method, making it easier to determine post-application water requirements for specific methods.*	11
As suggested permit conditions, these would be in place year long. Are the post-application water treatments mentioned in these conditions referring to VOC regulations, or meant to be year long conditions? *Response: These conditions are to be in place all year for mitigation of MITC off-gassing. They are coordinated with many of the VOC requirements. However, VOCs are a problem primarily from October through March. While, metam applications have lead to illness incidents at all times of the year.*	10
The primary recommendations should be for 2 water treatments rather than 3. Despite the third water treatment having a slight incremental benefit, this is inconsequential from an exposure perspective and not economically justified from a grower perspective. Depending upon soil type and discussion with local CAC, the grower should be allowed to use 0.2 – 0.4 inches of water at each post application water treatment. The CAC should be allowed the discretion, if local weather and field parameters warrant, to allow different amounts of water. *Response: The 3 post-application water requirement is based on field emission studies. The studies showed that typically, peaks in field emissions occurred around sunset on the first and second day following application. The post-applications water treatments are timed to suppress these peak field emissions. The CAC has the discretion to all different amounts of water "based on soil type, soil moisture, air temperatures and soil temperatures at the time of application."*	16, 23
Post Application Water Treatments must be completed w/in 2-3 hours. Can't complete 2 or 3 Water Treatments in 2-3 hours. The .20-.40 range allows CAC to determine amount of water required, based on soil type…. We should not make this determination. We are not soil scientists. *Response: <u>Each</u> post application water treatment must be completed within 2-3 hours. The range was included at the request of the California Farm Bureau, Western Growers, and the Metam Alliance.*	21

Delete post app. water treatments. This is included in VOC regulations and county permit conditions. *Response: DPR believes that the post-application water treatments are an effective way to reduce offsite movement of MITC. The final suggested permit conditions will apply statewide and for the entire year whereas the VOC regulations only apply from October through March.*	21
Size of Application Blocks	
Concerned that applications are allowed to large acreages. These applications are hard to manage because water supply can be interrupted and inversion conditions may develop in the middle of an application. *Response: DPR has limited the number of acres that can be treated to a maximum of 50 - 80 depending on the application method. We believe that these are reasonable application block sizes; for some of the application methods lower acreage limitations apply in sensitive areas. The operator of the property must prove they have sufficient water available to fulfill the post-water and MITC Control Plan requirements. Unanticipated interruptions in water cannot be regulated.*	1
Sprinkler applications are limited to a maximum of 25 acres within a 24-hour period within sensitive site areas. Does this apply to unoccupied structures (schools out of session)? *Response: A sensitive area is defined as an area where the fumigation takes place ¼ mile or less from <u>occupied</u> structures. Thus it does not apply to unoccupied structures or schools not in session and not scheduled to be in session during the buffer zone durations.*	3
With application block limitations, how will the number of blocks and the acreage of each block affect a grower's ability to efficiently treat multiple areas in an economical way? Irrigation equipment is usually rented. Sprinkler lines, pumping plants and the modifications required to make all of the connections along with labor costs are going to come at a significant expense to the grower. *Response: Illness caused by off-gassing comes at great expense to field workers and residents. The suggested permit conditions measures are designed to prevent bystander illness incidents. We have worked extensively with agricultural stakeholders to develop a reasonable set of mitigation measures.*	3

Buffer zones may overlap between growers, creating a situation where equipment is unavailable, or conflicts will develop between growers. Has this issue been discussed with the CAC? *Response: The suggested permit conditions were developed with input from the CAC. Buffer zones may not extend into neighboring agricultural land without permission from the neighboring grower and agreement on how field workers will be kept out of the buffer zone. In addition, we revised the multiple block requirements such that each grower only needs to consider their own blocks and not those of neighboring growers.*	3
Soil Capping	
The standard cultural practice in Solano County is to use a spray blade to apply 2" below the surface, then cover with 6" soil cap. No rolling or compaction is done after the application, and no post-application water is applied. If compaction is done, the 6" cap will be flattened to 2". *Response: DPR has changed the definition of soil cap, and no longer requires compaction.*	2
What is DPR's reasoning for the alternative of applying untreated soil as a 3" cap applied to the treated area? Wouldn't this require someone to violate the reentry interval? It would be very difficult to move that amount of soil and evenly distribute it, and applying untreated soil on treated soil negates the reason for treating it to begin with. *Response: The soil alternative is offered to those who don't have the water available to respond to off-site movement of MITC. It would require a tractor driver to go in and put soil on top of the treated area. That person would need to be protected, but would not violate any restricted entry provisions if the person were properly informed and protected.*	3
Definitions	
Under "occupied structure" what role does the 24-hour time component play in the definition? *Response: None; it was removed from the definition*	4
Under "occupied structure", the sentence "Homes occupied by the property owner or permittee are excluded from this definition" should be deleted. Any occupied structure needs to be vacated. *Response: DPR feels it is up to the property owner to determine if their home should be unoccupied or not. They are fully informed of the application process, toxicity, etc.*	

Clarification of the definition "occupied structure" is needed. Defining occupied structures as the "yard, living, or working area of occupied structures" would allow for a more consistent definition with other parts of the conditions. This is important because the MITC control plan and buffer zones are supposed to apply to occupied structures and bystander areas. *Response: DPR revised the description of how buffer zones are measured in the final suggested permit conditions. It now reads "Buffer zones shall not extend into properties of occupied structures or bystander areas unless advanced permission is obtained from the property owner/operator/legal resident to allow buffer zone intrusion onto the property up to a clearly specified boundary." We believe that this will address the concerns of the commenter wanting a clear definition of "occupied structure".*	10
The definition of "occupied structure" seems pretty broad. Is it supposed to include a storage or equipment shed that that may be occupied for a few minutes at a time? Can we restrict it to buildings that have 4 sides and a roof? *Response: DPR feels that the definition should include all structures that are occupied for any length of time. However, if the structure is on the owner's property and workers are notified to stay out for a specified time period, it seems reasonable to exempt the structure from the definition.*	22
Schools are specifically mentioned in the definition of sensitive areas. Yet, elsewhere the buffer for schools is listed as ½ mile or less. A single occupied structure is listed within the definition of sensitive area. Occupied structures should be protected, but not to the extent as schools, residential areas, hospitals and labor camps. *Response: DPR believes that a single occupied structure should be protected to the extent of other residential areas.*	9
Rather than adding "bystander" as a new term, the areas listed under the definition of bystander should be included under sensitive areas. *Response: DPR believes that the term "bystander" should be defined to clarify what type of areas we are referring to.*	11
"Bystander area" should be defined as an area highly frequented by people, including playgrounds, recreational areas, bus stops, and other similar areas where groups of people may visit during the application or buffer zone period, or other areas identified by the CAC. *Response: DPR does not want to limit protection only to bystander areas that are highly frequented.*	23

Multiple block definition needs to be revised for clarity. Multiple application sites within ¼ mile are considered to be a single block for buffer zone considerations. *Response: The multiple block definition originally included all application blocks made within ¼ mile, regardless of who owned the properties. DPR has changed the requirement to application blocks of an individual operator of the property. We will make sure that multiple block applications are discussed thoroughly in training.*	10
The proposed permit conditions take away the discretion of the CAC who should be determining what constitutes a sensitive site. Oppose the proposed DPR change. *Response: These are suggested permit conditions and are based on monitoring data, illness data, experience and modeling. The CAC still has the discretion to use permit conditions that have worked for their local areas in the past.*	23
In the definition of "bystander area", what is meant by "frequented"? What criteria will be used to determine the level of frequency with respect to these proposed measures? *Response: DPR is using the term "frequented" to mean that any number of people are in the area daily. This change was made in the final suggested permit conditions.*	24
Drench application – low pressure needs to be defined. *Response: The final suggested permit conditions do not discuss low pressure for drench applications.*	10
Treatment area definition needs to be added. Is the treatment area the area below the shanks/drip tape, or is the whole field considered to be the treatment area? *Response: The term "treatment area" is no longer used in the final permit conditions. We now use the term application block which is defined in regulation.*	10
The definition of soil cap should be clarified. When soil is injected at 6 inches, is it considered to have a 6 inch cap, or would 6 inches of additional soil need to be placed on top to exclude it from water treatments when shanking? Are there any other methods available for capping? *Response: The definition was changed. It now reads: "Following a metam band application, a minimum of 6 inches of untreated soil must be placed over the band to exclude it from water treatments."*	10

The definition and requirements for applications in sensitive areas is a critical point, and there should be absolute clarity about the requirements of an application in a sensitive area. The proposed permit conditions take away the discretion of CAC who should be determining what constitutes a sensitive site. *Response: These are suggested permit conditions and are based on monitoring data, illness data, experience and modeling. The CAC still has the discretion to use permit conditions that have worked for their local areas in the past.*	23

LIST OF COMMENTERS

1. California Rural Legal Assistance Foundation
2. Solano County Agricultural Commissioner Office
3. California Grape & Tree Fruit League
4. John Leahy, United States Environmental Protection Agency
5. Responsible Farmers Coalition
6. California Tomato Growers Association, Inc.
7. Santa Barbara County Agricultural Commissioner's Office
8. Imperial County Agricultural Commissioner's Office
9. Kern County Agricultural Commissioner's Office
10. Merced County Agricultural Commissioner's Office
11. Stanislaus County Agricultural Commissioner's Office
12. The Elmore Company, Brawley California
13. California Department of Food and Agriculture
14. Los Angeles County Agricultural Commissioner's Office
15. Office of Environmental Health Hazard Assessment
16. California Farm Bureau
17. Easter Lily Research Foundation
18. Del Norte County Agricultural Commissioner's Office
19. San Diego County Agricultural Commissioner's Office
20. Air Resources Control Board
21. San Joaquin Valley Deputy County Agricultural Commissioners
22. Jim Walsh, Department of Pesticide Regulation, Enforcement Branch
23. Metam Alliance
24. Riverside County Agricultural Commissioner's Office
25. Certis USA
26. Mike McKenry, University of California Cooperative Extension Nematologist
27. San Mateo County
28. Solano County